

**TRANSPORTATION FUND
FOR
CLEAN AIR**

**REPORT ON FY 2004/2005
ALLOCATIONS AND EFFECTIVENESS**

BAY AREA
AIR QUALITY



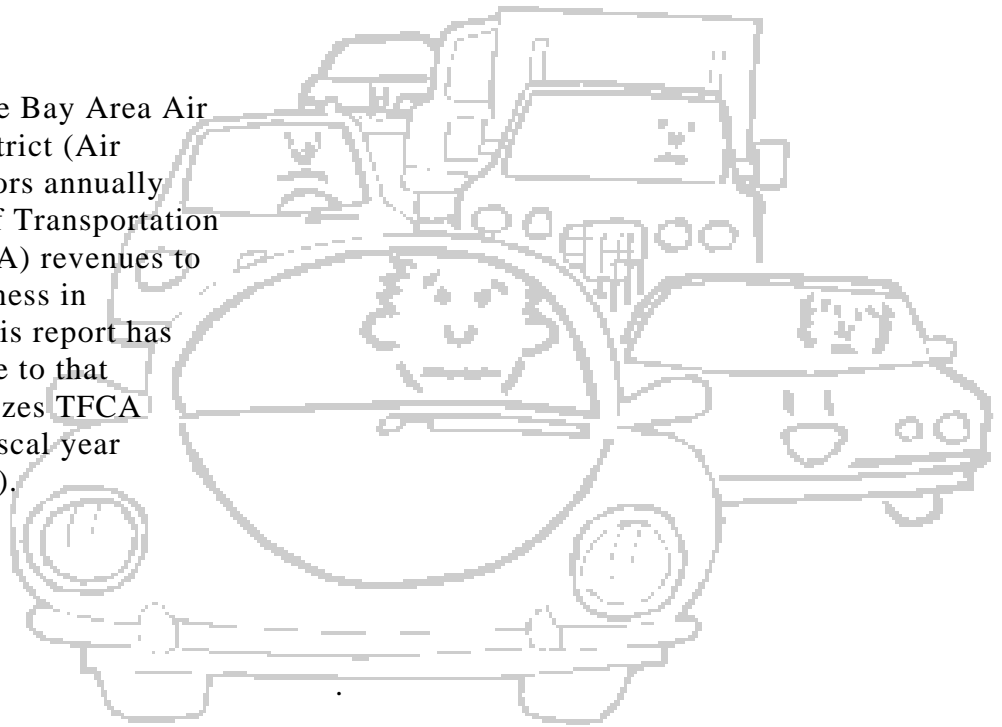
TRANSPORTATION
FUND FOR
CLEAN AIR

Bay Area Air Quality Management District
939 Ellis Street, San Francisco, CA 94109

April 2005

Summary

State law requires that the Bay Area Air Quality Management District (Air District) Board of Directors annually review the expenditure of Transportation Fund for Clean Air (TFCA) revenues to determine their effectiveness in improving air quality. This report has been prepared in response to that requirement and summarizes TFCA funding allocations for fiscal year 2004/2005 (FY 2004/05).



Major findings of this report are:

- ◆ TFCA funds have been allocated to eligible recipients for eligible projects, consistent with the legislation that authorizes the TFCA program.
- ◆ In FY 2004/05, the Air District approved TFCA funding of \$25.4 million, including \$23.7 million for 106 eligible projects (\$16.3 million for 47 Regional Fund projects and \$7.4 million for 59 Program Manager Fund projects), and \$1.7 million for administration costs.
- ◆ The \$25.4 million in TFCA funds allocated for FY 2004/05 includes \$21 million in calendar year 2004 Department of Motor Vehicle receipts, \$1.4 million in interest, and \$3 million in TFCA funds reallocated from previously funded projects that were canceled or completed under budget.
- ◆ The estimated lifetime emission reductions for the projects funded in FY 2004/05 are 441 tons of reactive organic gases (ROG), 488 tons of oxides of nitrogen (NO_x), and 104 tons of particulate matter (PM₁₀). Combined lifetime emission reductions for the three pollutants total 1,033 tons.
- ◆ The estimated lifetime emissions reduction in carbon dioxide (CO₂), a greenhouse gas, for the projects funded in FY 2004/05 is approximately 74,000 tons.
- ◆ The aggregate cost-effectiveness of all TFCA projects funded in FY 2004/05 is \$24,530 (TFCA dollars) per ton of emissions reduced (lifetime ROG, NO_x, and PM₁₀).
- ◆ Since the inception of the TFCA program in 1992, the Air District has allocated a total of \$283 million in TFCA funds to 1,720 projects.

The Challenge

On-road motor vehicles, including cars, trucks, and buses, are the most significant source of air pollution in the San Francisco Bay Area. Vehicle emissions contribute to unhealthful levels of ozone (summertime "smog") and particulate matter.

To protect public health, the State Legislature enacted the California Clean Air Act in 1988. In response, the Air District, in cooperation with the Metropolitan Transportation Commission and the Association of Bay Area Governments, prepared the *Bay Area Clean Air Plan (CAP)*. To reduce emissions from motor vehicles, the *CAP* contains transportation control measures (TCMs) and mobile source measures (MSMs). A TCM is defined as "any strategy to reduce vehicle trips, vehicle use, vehicle miles traveled, vehicle idling, or traffic congestion for the purpose of reducing motor vehicle emissions." Mobile source measures encourage the retirement of older, more polluting vehicles and the introduction of newer, less polluting motor vehicle technologies.

One Solution

To fund the implementation of TCMs and MSMs, the State Legislature allows air districts to impose a surcharge on motor vehicle registration fees paid within their jurisdictions. For the San Francisco Bay Area, the annual surcharge is \$4 per vehicle and applies to over 5 million vehicles registered in the region.

Revenues raised by the surcharge are allocated by the Air District through the Transportation Fund for Clean Air. TFCA funds may only be awarded to public agencies, such as cities and counties, transit districts, school districts, and the Metropolitan Transportation Commission.

TFCA projects have many benefits:

- ♦ Reducing air pollution, including air toxics, such as benzene
- ♦ Conserving energy and helping to reduce carbon dioxide emissions
- ♦ Improving water quality by decreasing contaminated runoff from roadways
- ♦ Improving transportation options
- ♦ Reducing traffic congestion

State legislation restricts Bay Area TFCA funding to the following types of projects:

- ♦ Implementation of ridesharing programs
- ♦ Clean fuel school and transit bus purchases or leases
- ♦ Feeder bus or shuttle service to rail and ferry stations and to airports
- ♦ Arterial traffic management
- ♦ Rail-bus integration and regional transit information systems
- ♦ Demonstrations in congestion pricing of highways, bridges and public transit
- ♦ Low-emission vehicle projects
- ♦ Smoking vehicles program
- ♦ Vehicle buy-back scrappage program
- ♦ Bicycle facility improvement projects
- ♦ Physical improvements that support "smart growth" projects

The Process

In calendar year 2004, \$21.3 million in new funding was received from the \$4 surcharge on motor vehicle registrations. Additional funds were available from interest earned on TFCA funds and from prior projects that were completed under budget, withdrawn or canceled.

Each year the Air District distributes TFCA funds through **two processes**.

Sixty percent of the TFCA funds are referred to as “Regional Funds.” The Regional Funds are used to fund eligible programs that are implemented by the Air District, such as the Smoking Vehicle, Vehicle Buy-Back, and Spare the Air programs. The remainder of the Regional Funds is distributed to public agencies through a competitive process.

The Air District Board of Directors adopts criteria to evaluate and rank project applications for TFCA Regional Funds. The evaluation criteria for FY 2004/05 are shown below. Proposed projects are evaluated with respect to each criterion. Projects are ranked based upon their total point score, and projects are funded in descending order until available funds have been allocated.

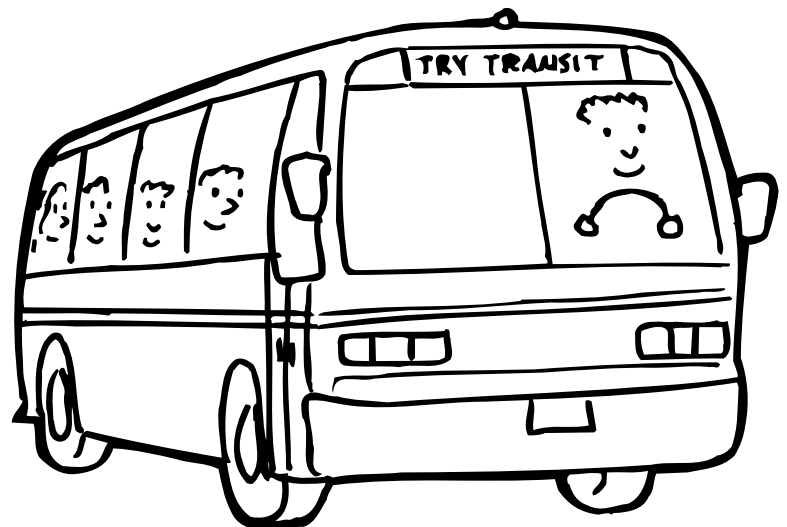
Scoring Criteria:

<i>FY 2004/05 Regional Funds</i>	<i>Points</i>
TFCA Funding Effectiveness	60
Other Project Attributes	15
Clean Air Policies and Programs	10
Disadvantaged Community	10
Promote Alternative Transportation Modes	5
Total	100

Cost-effectiveness, expressed in terms of TFCA dollars per ton of reduced emissions, is the most important criterion for ranking projects. Board-adopted policy requires that all projects must achieve a cost-effectiveness of \$90,000 per ton or less (TFCA \$\$ per ton).

Forty percent of the funds generated in each Bay Area county are returned to the county’s designated Program Manager, as mandated by the TFCA-enabling legislation. The 40% funds are referred to as “Program Manager Funds.” Program Managers adopt their own criteria to select projects for funding, provided all projects meet basic TFCA eligibility requirements. In some counties, all or a portion of the TFCA Program Manager Funds are allocated by formula as a direct subvention to cities within the county. Each county then selects eligible projects for its share of the Program Manager funds.

The Program Manager projects are reviewed by Air District staff and submitted to the Air District Board of Directors for approval. Board-adopted policy requires that the projects in each Program Manager expenditure plan achieve a cost-effectiveness of \$90,000 per ton or less (TFCA \$\$ per ton) on an aggregate basis.



Projects

In FY 2004/05, the TFCA program awarded \$25.4 million in grants. A total of \$16.3 million in Regional Funds allocations included \$7.3 million for five projects administered by the Air District (Appendix A) and \$9.0 million in grants to other public agencies for 42 projects (Appendix B). Grants totaling \$7.4 million in Program Manager Funds were awarded for 59 local projects (Appendix C). Administrative costs for managing District programs, Regional Funds and Program Manager Funds totaled \$1.7 million.

Trip Reduction/Ridesharing projects, providing services and incentives to encourage the use of carpools and

vanpools, received the largest percent of funding, 17.2%. The **Vehicle Buy Back** program, a voluntary program administered by the Air District to scrap older, higher polluting vehicles, received the second largest percentage of funds, 14.9%. **Shuttle and Feeder Bus** projects, connecting people between home, transit, and work, received 14% of the total available funding. Projects to reduce emissions from the heavy-duty fleet, including **Heavy-Duty Natural Gas Vehicles, School Buses and Filters for Diesel Engines**, together received 18.3%. **Bicycle Facilities**, including bike lanes, paths, routes, lockers and racks, received 10.4% of the total funds. **Arterial Management** projects, including signal timing to smooth traffic flow received 6%.

Category	# of FY 2004/05 Projects	FY 2004/05 TFCA\$	% of 04/05 TFCA \$	Emissions Reduction, (tons) ⁽²⁾	% of Emissions Reduction
Administration	N/A ⁽¹⁾	\$1,698,534	6.7%	N/A	N/A
Smoking Vehicle Program	1	\$692,616	2.7%	62	6%
Vehicle Buy Back Program	1	\$3,770,625	14.9%	505	49%
Light-Duty Vehicle Incentives	3	\$562,000	2.2%	5	0%
Spare the Air Program	1	\$822,076	3.2%	9	1%
Trip Reduction/Ridesharing	27	\$4,366,779	17.2%	101	13%
Smart Growth	4	\$857,100	3.4%	12	1%
Arterial Management	6	\$1,516,397	6.0%	31	3%
Bicycle Facilities	26	\$2,648,580	10.4%	32	3%
Shuttle and Feeder Buses	15	\$3,560,463	14.0%	45	4%
School Buses	1	\$40,000	0.2%	1	0%
Heavy-Duty Natural Gas Vehicles	10	\$2,349,828	9.3%	69	7%
Natural Gas Infrastructure	2	\$82,526	0.3%	N/A	N/A
Electric/Hydrogen Infrastructure	2	\$150,000	0.6%	N/A	N/A
Filters for Diesel Engines	7	\$2,238,066	8.8%	162	16%
T O T A L	106	\$25,355,590	100% ⁽³⁾	1034	100%

N/A= not applicable. No direct emission reductions are attributed to Administration or to infrastructure for clean air vehicles.

(1)The Air District and each of the nine counties have an "Administration" component of their TFCA programs. Beginning with this Annual Report, Administration will no longer be counted as a "project".

(2) Lifetime emissions reductions of ROG, NOx, and PM₁₀ combined.

(3) Total equals 99.9% due to rounding.

Results

Emission Reductions

Air District staff estimates the emissions reduced over the life of every project that receives TFCA funding. The potential of each project to reduce motor vehicle emissions varies depending upon the type of project, the scale of the project, geographic location and other factors.

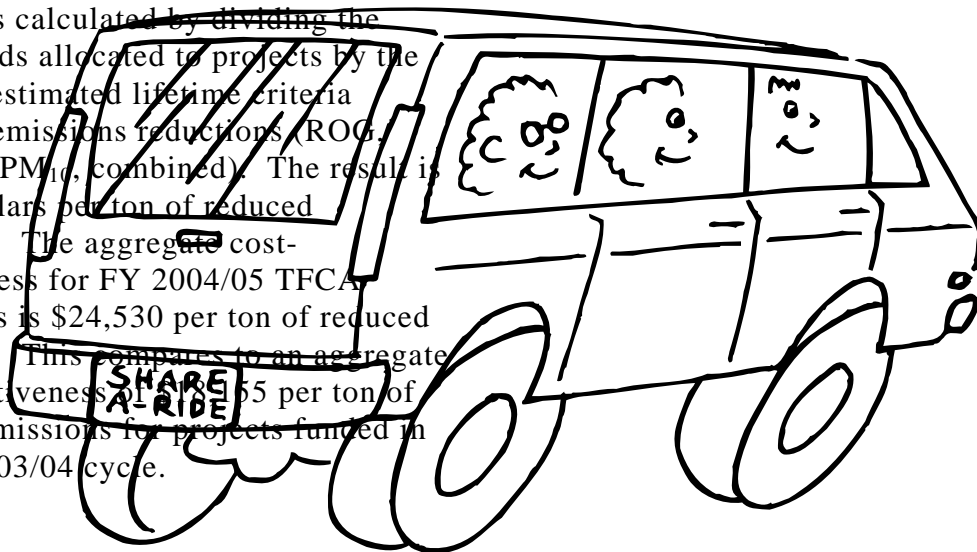
The total lifetime emission reductions expected from the implementation of projects receiving TFCA funding in FY 2004/05 is 1,033 tons – this represents the sum of ozone precursors (441 tons of ROG and 488 tons of NO_x) and particulate matter (104 tons of PM₁₀). This figure includes 231 tons of emissions reduced from diesel-powered equipment, including projects to replace heavy duty diesel engines and to install filters on existing diesel engines. The estimated lifetime emissions reduction for carbon dioxide (CO₂), a greenhouse gas, for the projects funded in 2004/05 is approximately 74,000 tons.

Cost-Effectiveness

The cost-effectiveness of the TFCA program is calculated by dividing the TFCA funds allocated to projects by the projects' estimated lifetime criteria pollutant emissions reductions (ROG, NO_x, and PM₁₀, combined). The result is TFCA dollars per ton of reduced emissions. The aggregate cost-effectiveness for FY 2004/05 TFCA allocations is \$24,530 per ton of reduced emissions. This compares to an aggregate cost-effectiveness of \$18,555 per ton of reduced emissions for projects funded in the FY 2003/04 cycle.

Projects

Appendices A, B, and C list all the projects that received TFCA funding in FY 2004/05.



APPENDIX A: FY 2004/05 TFCA-Funded Air District Projects

Proj#	Sponsor	Project Title	TFCA\$ Awarded
04R01	BAAQMD	Smoking Vehicle Program	\$692,616
04R02	BAAQMD	Vehicle Buy Back Program *	\$3,770,625
04R03	BAAQMD	Spare The Air	\$822,076
04R04	BAAQMD	Vehicle Incentive Program *	\$500,000
04R70	BAAQMD	Solid Waste Collection Vehicle Incentives	\$1,533,216
		SUB-T O T A L : 5 projects	\$7,318,533
	BAAQMD	SUB-T O T A L : Admin Costs	\$1,280,052
		T O T A L	\$8,598,585

* Greater than 95% of the funds for the Vehicle Buy-Back Program (Project 04R02) are “pass-through” funds from the Air District to vehicle owners and to contractors who implement the program. Similarly, all funds allocated to the Vehicle Incentive Program (Project 04R04) are awarded to public agencies to acquire light-duty clean air vehicles.

APPENDIX B: FY 2004/05 TFCA Regional Fund Projects

Proj#	Sponsor	Project Title	TFCA\$ Awarded
04R07	AC Transit	Heavy-duty Vehicle - 10 gasoline-electric transit buses	\$1,000,000
04R44	Alameda County Congestion Management Agency	Telegraph Transit Priority for AC Transit	\$394,000
04R31	Alameda County Public Works Agency	Class 2 Bicycle Lanes: E. Castro Valley Blvd. (1 mi.)	\$45,000
04R61	Alameda-Contra Costa Transit District	Shuttle Bus Service - Oakland MacArthur Corridor BART Connection (2 year)	\$514,672
04R62	Alameda-Contra Costa Transit District	Oakland MacArthur Corridor Transit Bus Traffic Signal Prioritization	\$205,000
04R38	City of Albany	Class 2 Bicycle Lanes: Marin Ave. (1.5 mi.)	\$120,000
04R17	City of Belmont	Heavy-Duty Vehicle Replacement -- 1 CNG street sweeper	\$73,000
04R52	City of Berkeley	Dwight Way Traffic Calming	\$99,000
04R18	City of Cupertino	Heavy-Duty Vehicle Retrofit -- 7 refuse trucks with emission control devices	\$63,000
04R51	City of Cupertino	Mary Avenue Gateway & Refuge Project	\$100,000
04R53	City of Livermore	Downtown First Street Streetscape Improvement Project	\$600,000
04R39	City of Morgan Hill	Class 2 / Class 3 Bicycle Lanes: Cochrane Rd. (1.5 mi.)	\$73,166
04R20	City of Oakland	Heavy-Duty Vehicle Replacement -- 1 CNG street sweeper & 1 CNG truck	\$124,500
04R26	City of Oakland	Bicycle Racks and Lockers	\$60,000
04R28	City of Oakland	Class 2 Bicycle Lane: Market St. (1 mi.)	\$49,711
04R15	City of Palo Alto	Heavy-Duty Vehicle Replacement -- 1 CNG street sweeper	\$60,000
04R68	City of San Carlos	Shuttle Bus Service- San Carlos	\$62,082
04R13	City of San Leandro	Heavy-Duty Vehicle Retrofit -- 24 refuse truck emission control devices	\$216,000
04R34	City of San Leandro	Class 1 Bicycle Trail: Bay Trail Segment (0.2 mi.)	\$85,000
04R69	City of San Leandro	Shuttle Bus Service- San Leandro LINKS	\$67,838
04R40	City of Santa Rosa	Class 1 Bicycle Path: Joe Rodota Trail	\$140,000
04R27	City of Suisun City	Class 1 Bicycle Path: Central County Bikeway (0.6 mi.)	\$130,000
04R48	City of Sunnyvale	In-Pavement Crosswalk Warning Lights	\$58,100
04R14	City of Union City	Heavy-Duty Vehicle Replacement -- 5 CNG refuse vehicles	\$225,483
04R09	Hayward Area Recreation and Park District	Heavy-Duty Vehicle Repower -- 1 CNG truck	\$40,000
04R56	Metropolitan Transportation Commission	Regional Rideshare Program	\$1,000,000
04R19	Napa Valley Unified School District	Repower 2 heavy-duty school buses to Electricity	\$323,350
04R65	Peninsula Corridor Joint Powers Board	Caltrain Shuttle Bus Service - New Tamien Weekend Shuttle	\$25,000
04R64	Peninsula Corridor Joint Powers Board	Shuttle Bus Service - Caltrain Stations	\$996,371
04R22	Port of Oakland	Heavy-Duty Vehicle Replacement -- 5 CNG transit buses (Air BART)	\$290,000
04R23	Port of Oakland	Heavy-Duty Vehicle Replacement -- 1 CNG street sweeper	\$68,000
04R24	Port of Oakland	Heavy-Duty Vehicle Replacement -- 12 CNG airport shuttles	\$323,625
04R06	San Francisco Department of Parking and Traffic	Class 2 Bicycle Lanes: Alemany Blvd. (2.1 mi.)	\$26,500

APPENDIX B: FY 2004/05 TFCA Regional Fund Projects

Proj#	Sponsor	Project Title	TFCA\$ Awarded
04R10	San Francisco International Airport	Heavy-Duty Vehicle Replacement -- 2 LPG airport shuttles	\$27,300
04R11	San Francisco International Airport	Heavy-Duty Vehicle Replacement -- 8 CNG airport shuttles	\$157,920
04R05	San Joaquin Regional Rail Commission	Shuttle Bus Service - Pleasanton ACE and Dublin/Pleasanton BART stations	\$43,500
04R57	San Jose State University - Associated Students	Trip Reduction Program	\$100,000
04R55	Santa Clara Valley Transportation Authority	Transportation Demand Management Incentive Program	\$49,000
04R66	Santa Clara Valley Transportation Authority	Shuttle Bus Service - ACE Commuter Rail	\$800,000
04R08	Santa Rosa CityBus	Retrofit 26 transit buses with diesel and NOx emission control devices	\$22,500
04R59	The Regents of the University of California (Berkeley Campus)	UC Berkeley Transportation Alternatives Marketing & Outreach Project	\$44,750
04R63	University of California, San Francisco	Shuttle Bus Service - Mission Bay - China Basin, Powell Street BART station.	\$50,000
		T O T A L : 42 projects	\$8,953,368

APPENDIX C: FY 2004/05 TFCA Program Manager Fund Projects

Proj#	Sponsor	Project Title	TFCA\$ Awarded
04ALA01	City of Fremont	Signal Timing - various corridors	\$123,000
04ALA02	City of Union City	Natural Gas Fueling Facility Improvements	\$50,000
04ALA03	BART	Free AM BART on Spare The Air Days	\$780,000
04CC01	TRANSPAC / City of Pleasant Hill	Countywide Carpool Incentive Program	\$146,000
04CC02	TRANSPAC / City of Pleasant Hill	Countywide Transit Incentive Program	\$170,000
04CC03	TRANSPAC / City of Pleasant Hill	Central/East County Employer Network	\$120,000
04CC04	TRANSPAC / City of Pleasant Hill	West/Central/East SchoolPool Program	\$180,000
04CC05	City of San Ramon / SWAT	Countywide Vanpool Incentive Program	\$70,000
04CC06	City of San Ramon / SWAT	South County Employer Network	\$69,238
04CC07	City of San Ramon / SWAT	South County School Ridematching Program	\$25,000
04CC08	City of San Ramon / SWAT	Countywide Clean Fuel Vehicle Program	\$32,526
04CC09	City of Lafayette	Lamorinda School Bus Program - 17 School Buses	\$40,000
04CC10	WCCTAC	Countywide Guaranteed Ride Home Program	\$148,000
04CC11	WCCTAC	West County Transit Incentive Program	\$83,500
04CC12	WCCTAC	West County Employer Network	\$87,000
04CC13	City of Martinez	San Francisco Bay Trail, Phase II	\$87,508
04MAR01	City of Novato	Class II Bicycle Lanes - Diablo Ave.	\$59,300
04MAR02	City of Novato	Purchase 10 Bicycles for Police Patrol	\$22,180
04MAR03	Marin County Transit District	Ride & Roll Project: Free Bus Passes	\$75,000
04MAR04	Transportation Authority of Marin	Safe Routes to School	\$266,000
04MAR05	City of San Anselmo	Police Electric Parking Enforcement Vehicles - 4 LDV	\$12,000
04NAP01	County of Napa	Class II bicycle lane - SR 121 to Cuttings Wharf	\$115,000
04NAP02	Napa County Transportation Planning Agency	Bus Bike Racks - Calistoga Handy Van	\$1,500
04SC01	County of Santa Clara	Alamden Expway Bike/Ped Imp. (Ironwood to Foxworthy)	\$370,000
04SC02	County of Santa Clara	Expway Bike Shoulder Delineation	\$128,895
04SC03	City of Mountain View	Stevens Creek Bicycle-Pedestrian Trail - Reach 4	\$700,000
04SC04	City of San Jose	Bascom Corridor Signal Timing	\$119,000
04SC05	City of San Jose	San Jose ITS West - Stevens Creek	\$346,000
04SC06	Santa Clara Valley Transportation Authority	VTA Light Rail Shuttle Program	\$300,000
04SC07	City of San Jose	Bascom signal Transit Priority	\$329,397
04SF01	Golden Gate Park Concourse Authority	Golden Gate Park Shuttle	\$64,000
04SF02	Golden Gate Park Concourse Authority	Arguello Class II Bike Lane	\$35,000
04SF03	County of San Francisco	Hall of Justice Shuttle	\$52,000
04SF04	County of San Francisco	Bicycles for Gardeners - Dept. of Parks & Recreation	\$19,000
04SF05	County of San Francisco	Sidewalk Bicycle Racks	\$95,000
04SF06	County of San Francisco	Class 2 Bicycle Lanes - Mississippi St.	\$8,500
04SF07	County of San Francisco	Class 2 Bicycle Lanes - Sloat Blvd.	\$58,000
04SF08	County of San Francisco	Class 2 Bicycle Lanes - Laguna Honda Blvd.	\$10,500
04SF09	County of San Francisco	Class 2 Bicycle Lanes - Phelan Ave.	\$82,000

APPENDIX C: FY 2004/05 TFCA Program Manager Fund Projects

Proj#	Sponsor	Project Title	TFCA\$ Awarded
04SF10	Presidio Trust	Class 2 Bicycle Lanes - Washington Blvd.	\$77,000
04SF11	County of San Francisco	SFPUC 24th Street BART Station Shuttle	\$30,000
04SF12	University of California, San Francisco	Bicycle Patrol Program	\$7,000
04SF13	County of San Francisco	Hydrogen Fuel Cell Vehicle Pilot Project	\$100,000
04SF14	County of San Francisco	Clean Air Vehicle Replacement - 6 SULEV, 8 CNG & 3 ZEV	\$50,000
04SF15	BART	Embarcadero Station O&M	\$40,000
04SM01	City of Menlo Park	Mid-Day Shuttle	\$35,000
04SM02	Peninsula Congestion Relief Alliance	Voluntary Trip Reduction Program	\$350,000
04SM03	San Mateo County Transit District	SamTrans Shuttle Bus Program	\$495,000
04SOL01	Solano Transportation Authority	Route 30 Natural Gas Shuttle Service	\$25,000
04SOL02	STA Solano Napa Commuter Information	Ridesharing/Trip Reduction Program	\$195,000
04SOL03	City of Suisun City	Central County Bikeway Gap Closure	\$32,000
04SOL04	Solano County	Electric Vehicle Public Charging Station	\$50,000
04SON01	City of Santa Rosa	Purchase of PM & NOx Retrofit Kits (7 Buses)	\$40,000
04SON02	City of Santa Rosa	FY 04/05 Student Pass Subsidy	\$70,000
04SON03	City of Santa Rosa	FY 04/05 Voluntary Trip Reduction Program	\$129,802
04SON04	Sonoma County Transit	Cotati Intermodal Facility/ Park & Ride	\$26,369
04SON05	Sonoma County Transit	Petaluma Transit Mall	\$38,282
04SON06	Sonoma County Transit	Windsor Intermodal Facility/ Park & Ride Lot	\$66,658
04SON07	Sonoma County Transit	Local Transit Pass Subsidy/Marketing Program	\$48,000
		SUB-T O T A L : 59 projects	\$7,385,155
04ALA00	Alameda County CMA	Program Administration Cost	\$90,850
04CC00	Contra Costa Transportation Authority	Program Administration Cost	\$64,019
04MAR00	Transportation Authority of Marin	Program Administration Cost	\$18,738
04NAP00	Napa County Transportation Planning Agency	Program Administration Cost	\$5,000
04SC00	Santa Clara Valley Transportation Authority	Program Administration Cost	\$110,409
04SF00	San Francisco County Transportation Authority	Program Administration Cost	\$35,460
04SM00	San Mateo C/CAG	Program Administration Cost	\$49,403
04SOL00	Solano Transportation Authority	Program Administration Cost	\$15,237
04SON00	Sonoma County Transportation Authority	Program Administration Cost	\$29,366
		SUB-T O T A L: Admin Costs	\$418,482
		T O T A L	\$7,803,637